

TracerPlus Std / TracerPlus Pro

Version 2.8 User Manual



TracerPlus Version 2.8
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TracerPlus Std / TracerPlus Pro

Version 2.8 User Manual

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Chapter 1: Introduction

1.1 What is TracerPlus?

Create enterprise class, barcode enabled, data collection applications in minutes for most tasks including asset management, inventory control, and many others with TracerPlus. No programming knowledge is needed. Simply create your familiar forms right on your PDA.

Designed by Symbol Certified Programmers, TracerPlus incorporates time saving features that are not seen in any other applications. "Data Entry Validation", "Auto Find", and "After Scan Settings" are just a few of the features that will save you time and money. If you or your company has to collect data, TracerPlus is the right choice.

Common TracerPlus Applications

- Inventory Management.
- Asset Management.
- Courier Receipt Printing.
- Library Book Tracking.
- Route Delivery Management.
- Vendor Managed Inventory.
- Remote Store Management.
- Computer Inventory.
- Job Material Management.
- Time Tracking.
- Trade Show Visitor Tracking.
- Electronic Signature Capture.

1.2 New Features in TracerPlus 2.8

TracerPlus 2.8 introduces exciting new features that significantly enhance the capabilities of TracerPlus mobile data collection software.

Inter-related (lookup) tables are incorporated in the Professional version of TracerPlus. Lookup tables enable users to define sessions that reference other sessions for field data. Common uses for this feature include incorporating price lists and part lists into a mobile sales application.

Calculated fields and field parsing give TracerPlus users even greater flexibility. Perform math calculations between multiple fields with the new calculated field type in TracerPlus Pro. Field parsing allows TracerPlus users to parse field data, or barcodes. Scan a delimited barcode and take only the data you need. These features along with lookup tables make TracerPlus 2.8 more powerful than ever.

Finally, after popular request, TracerPlus 2.8 introduces true combo box support in the Entry screen. In past versions of TracerPlus drop down field types could only be populated with items included in the drop down list. 2.8 now allows users the ability to manually enter a new value if the drop down does not contain the data they are looking for.

TracerPlus 2.8 New Features List

- Lookup tables.
- Calculated fields.
- Field Parsing.
- Drop down field editing.

1.3 Free Trial

TracerPlus is a shareware application. A shareware application typically means that you can use it on a trial basis for no fee. In the TracerPlus Splash Screen, select the version you would like to try (Standard or Pro) and you can demo all of the features for that version.

The trial download is limited in that only allows 2 sessions can be created and only 5 records will transfer to and from the PC. Once you decide to purchase TracerPlus, simply fill out the PTS Registration Request Page accessible from your PC's Start Menu. A registration code will be sent within 24 hours. Alternatively, you can register from our website at <http://www.ptshome.com>. This registration code will activate your trial version, enabling it for full use; there is no need to reinstall.

1.4 Learning TracerPlus

To discover the full power of TracerPlus, we strongly recommend that you read this manual completely. However, with only a basic understanding of **Chapters 3 and 4**, a user can begin to create basic applications with TracerPlus. If you wish to send data to a PC or retrieve a database from the PC, **Chapter 5** should be read thoroughly. Finally, if a system administrator needs to deploy TracerPlus sessions to a mobile workforce, **Chapter 7** should be read thoroughly. In order to ease the learning process of TracerPlus, a registered user receives free email support for 30 days from the date of purchase. Purchase of extended support agreements is also available, offering both email and phone support.

1.5 Barcoding with TracerPlus

TracerPlus is designed to speed data entry with or without a barcode enabled PDA. Popup menus, time/date stamps and auto submit features allow users to collect data faster and more accurately. However, to discover the full power of TracerPlus, we recommend using a barcode enabled PDA. A list of the current barcode enabled PDAs supported by TracerPlus are listed below. All of these units are available for purchase at <http://www.ptshome.com>.

Current Palm OS barcode enabled PDAs include:

[SPT-1500/1550 Series by Symbol Technologies](#)

[SPT-1700/1800 Series by Symbol Technologies](#)

[Meazura Bar Code Terminal by Aceeca](#)

[Plug-N-Scan barcode System for any Palm Pilot by PTS](#)

CSM 150 barcode Module for Handspring Visor by Symbol - Discontinued

Momentum II barcode Module for Handspring Visor by PSC – Discontinued

Various barcode Plug-ins that utilize Wedge Applications

1.6 Integrating TracerPlus

TracerPlus data can be HotSynced to the PC in one of six popular file formats. Refer to Section 5.3.1 for a more detailed discussion on file transfer formats. This flexibility makes it possible to integrate TracerPlus with most programs and databases. **ODBC Link for TracerPlus** further simplifies the integration process by allowing users to seamlessly connect to ODBC data sources. ODBC Link for TracerPlus is a separate application and is available for free evaluation from our website at <http://www.ptshome.com>. TracerPlus Pro also allows for Custom HotSync paths, allowing users to specify a specific file download location. Below is a list of the more popular programs and databases TracerPlus is integrated with.

- Excel
- Microsoft Access
- Microsoft SQL
- Oracle
- People Soft
- FileMaker
- FoxPro

1.7 PTS Support

As a registered TracerPlus user, you receive free email support for 30 days from the date of purchase. During this period, we are available to answer TracerPlus questions as well as general barcode questions. Our goal is to provide TracerPlus users the tools to capitalize on the efficiencies of bar code data acquisition. Please visit <http://ptshome.com/support.htm> for frequently asked questions. To contact PTS technical support, please email support@ptshome.com.

Extended support contracts, including phone support can be purchased at <http://www.ptshome.com/support.htm>.

PTS also hosts a TracerPlus User Group. The group was created to offer our users a communication channel in which to discuss TracerPlus. You can join the TracerPlus User Group at <http://www.ptshome.com/support.htm>.

Chapter 2: Installation

This chapter details the steps for installing TracerPlus.

2.1 System Requirements

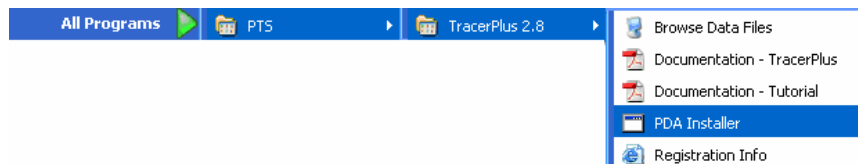
- Windows 95/98/NT/2000/XP
- Palm Desktop v3.1 or higher (includes HotSync Manager)
- Palm OS PDA running Palm OS 3.0 or higher

2.2 Automatic Installation

1. Make sure you have **Palm Desktop** installed and working with your PDA. If not, please visit www.palmone.com or contact your PDA vendor for support. TracerPlus requires that Palm Desktop (and the included HotSync Manager) be installed and working before TracerPlus can be installed.
2. **Download** the most current version of TracerPlus from the PTS website or an authorized PTS reseller. TracerPlus can be downloaded from the PTS website at <http://www.ptshome.com/downloads.shtml>.
3. **Install TracerPlus** to your PC by simply double clicking the downloaded install file. This file is named tracerp.exe and is located in the location you chose to save the downloaded file.
4. Once the installation is complete, perform a **HotSync** with your PDA. At this point you will see the TracerPlus application installed on your PDA.
5. **On the PDA**, tap the TracerPlus icon.
6. Select the mode you want (**Standard or Pro**), then click the Try It Button.
7. Click the **New** button to create a new record.
8. Test your scanner **by scanning a barcode**. Refer to your scanner's hardware manual for instructions on activating the barcode scanner.
9. Click the **Done** button to save the barcode just scanned.
10. To begin customizing your TracerPlus data capture experience, proceed to the session setup portion of this manual

2.3 Installing TracerPlus on Multiple PDAs

Before installing TracerPlus on multiple PDAs, it is recommended that each PDA be HotSynced at least once with Palm Desktop and assigned a PDA user name. With TracerPlus installed on your PC use the PDA Installer to select the PDAs you want to install TracerPlus on. The PDA install tool can be found on your PC, click on **Start → Programs → PTS → Tracer Plus**, and select the "PDA Installer" icon. Then simply HotSync each PDA and TracerPlus will be installed.



2.4 Registering TracerPlus

TracerPlus is an application that requires registration for full functionality. The trial version of TracerPlus limits the number of records transferred to and from the PC to five, and the number of sessions to two. Once TracerPlus is registered, these trial limitations are lifted.

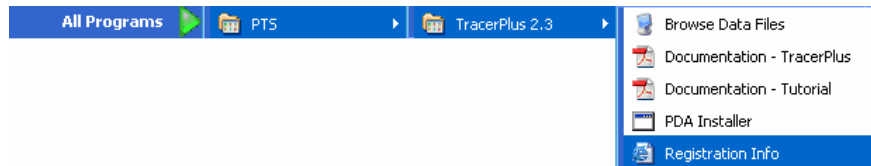
PTS encourages all users who benefit from TracerPlus to register their copy. To register TracerPlus, we only require your TracerPlus PDA ID, your operating mode (Standard or Pro) and an Email address. We generate a unique registration code for your TracerPlus PDA ID and the version of TracerPlus you select, so it is important that you send the ID exactly as it appears on the TracerPlus splash screen; capitalization and spacing are critical.

Before you Register:

1. Ensure that the PDA(s) you want to register is running the version of TracerPlus you purchased or intend to purchase. You can view the active version of TracerPlus in the TracerPlus Splash Screen. If you are purchasing External Device licenses make sure the device type you want to register is selected in the External Devices screen.
2. Perform a HotSync to update your PC with the latest selected options.

How to Register:

1. On your PC, click on **Start → Programs → PTS → Tracer Plus**, and select the "Registration Info" icon.



2. Locate the PDA you want to register, and click on the link to purchase the software. If you are an existing user, follow the links for upgrading your license. If you have already purchased TracerPlus through PTS or an authorized reseller please proceed to step 4.
3. Once your purchase is completed and payment is received, you will receive a Order confirmation from PTS.
4. Complete, review and submit the Registration Info form from your PC.

Note: Make sure that the correct version of TracerPlus is selected.

5. Once this step is completed, your registration code is e-mailed to the address provided. This process usually takes one hour but we ask that you allow one business day in the event of heavy traffic or any other delay.
6. Once you receive your registration code, follow the instructions below to enter the code into your PDA.

Entering Your Registration Code

1. Start the **TracerPlus** application on the PDA.
2. Click the **Register** button in the TracerPlus Splash Screen.
3. Enter your **Registration Code** at the Code prompt.

4. If the Registration Code is valid, you will receive a **Thank you for Purchasing TracerPlus** message.

2.5 Upgrading TracerPlus

To upgrade from an existing version of TracerPlus or to upgrade to TracerPlus Pro, follow these steps:

2.5.1 Upgrading from TracerPlus 2.8 Standard to TracerPlus 2.8 Pro

1. If you have already purchased and registered with a registration code for TracerPlus 2.8 Standard Edition, you will need a new registration code for the Pro Edition.
2. Start the TracerPlus 2.8 application on your PDA, and go to the main screen.
3. Click on the menu and choose "About TracerPlus"
4. Click the "Re-register" button in the lower right corner of the screen.
5. Click "OK", then exit TracerPlus, and start TracerPlus again.
6. Select the "Pro Mode," and tap "Register"
7. Now you can enter your new registration code for the Pro version.

Note: Backup all data when switching from Standard to Professional as this will not carry over your data.

2.5.2 Upgrading from TracerPlus 2.3 and below

Steps to follow for upgrading from TracerPlus version 1.50 to 2.8:

1. Install TracerPlus 2.8 as you would for a new product.
2. The first time you run TracerPlus 2.8, it will ask if you would like to perform an update. This update will automatically import your sessions and fields from previous versions of TracerPlus. NOTE: your data will not be imported, only the session and field definitions.
3. If necessary, visit <http://www.ptshome.com/upgrade.shtml> for more details.

Below are some special considerations for users familiar with TracerPlus 1.5x. If you have been using a 1.5x version of TracerPlus, you may need to adjust certain aspects of your settings when upgrading to TracerPlus 2.8.

TracerPlus 2.8 Exists as a Separate Application

Since TracerPlus 2.8 is a significant version update, we have created this application as a separate and independent application from any previous TracerPlus versions. We hope that this process eases the transition process of existing TracerPlus users.

Automatic Import of 1.5x Session and Field Settings

The first time you run TracerPlus 2.8 on your PDA, TracerPlus will attempt to copy the session and field settings from your existing 1.5x version (1.50 and higher only).

New Registration Code Required

Chapter 2: Installation

Due to a new licensing algorithm, all users upgrading to TracerPlus 2.8 from 2.3 and below will need to get a new registration code. This process is discussed in Section 2.4. You can easily register by clicking the shortcut **Start → Programs → PTS → Tracer Plus → Registration Info**.

New Location for Data Files

OLD: C:\Palm\username\TracerPlus\
NEW: C:\Program Files\PTS\TracerPlus\Data\username\FromPDA

New Location for Uploading Files

OLD: C:\Palm\username\TracerPlus\PCData
NEW: C:\Program Files\PTS\TracerPlus\Data\username\ToPDA

New Name for List Upload Files

OLD: S01_L02.txt
NEW: S01F02.txt

Note: The “Custom HotSync Path” feature is available only in **TracerPlus 2.0 and above Pro edition**.

2.6 Removing TracerPlus Installation

In the unlikely event that you would like to remove TracerPlus from your PDA, follow these simple instructions.

1. On your PC, select “PDA Installer” from Start Menu programs within TracerPlus.
2. Select to “Remove TracerPlus” from PDA Installer application.
3. Use the Add/Remove Programs feature in MS Windows via Control panel to Remove PTS TracerPlus.
4. On your PDA, manually delete the application. First, click the Home Icon (typically on the lower left of the PDA screen), followed by the Menu Icon (just below Home). Choose the Delete option and select Tracer+ 2.8.

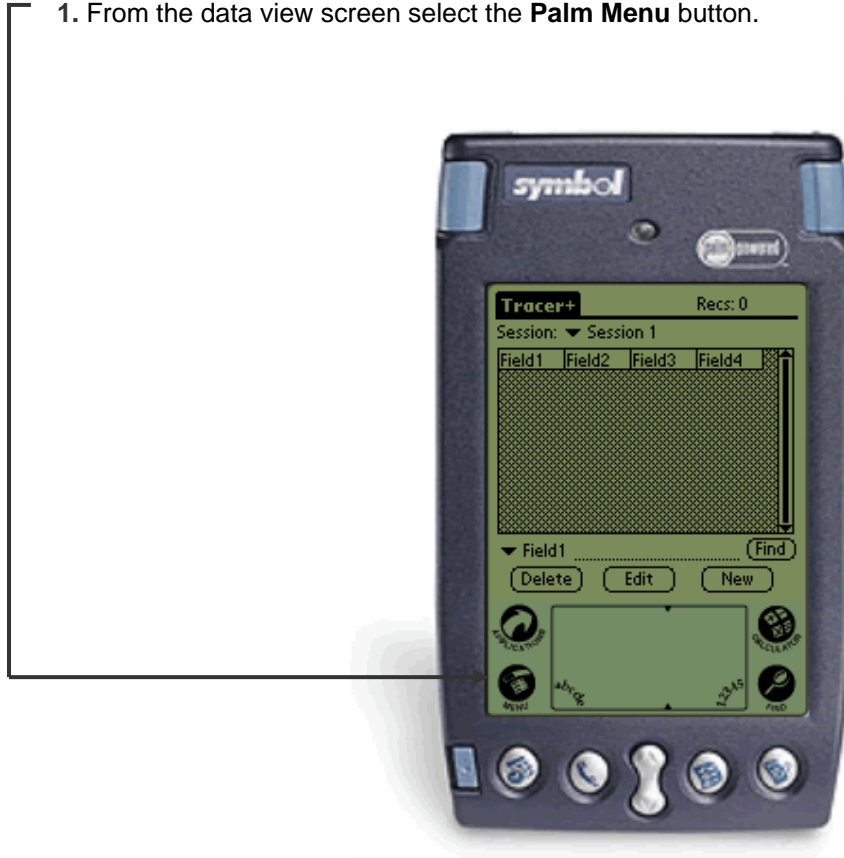
Chapter 3: Sessions

TracerPlus allows users to create up to 32 unique data capture programs. These unique programs are called *Sessions*. Sessions are easily accessed from the **Main Screen**, where captured data can be viewed and searched. In this section, you will learn how to configure session attributes to meet your data capture needs. **Chapter 4** details how to configure individual fields within a Session.

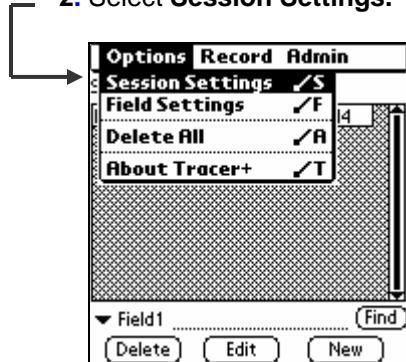
3.1 Configuring Session Attributes

The first step in creating a TracerPlus Session is to assign a name. This name is displayed in the session menu, and is selected by the user when collecting data, editing field settings, or editing session settings. To create a Session name, follow the steps below.

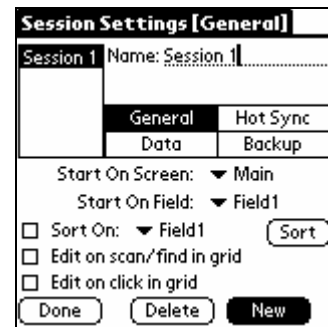
1. From the data view screen select the **Palm Menu** button.



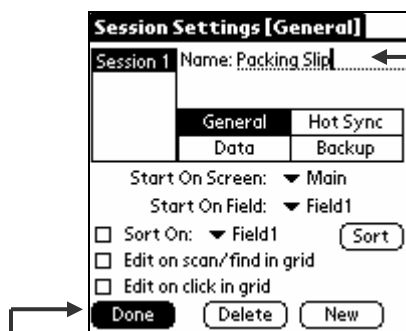
2. Select **Session Settings**.



3. Select the **New** button.



4. Enter the name of the session you are creating.

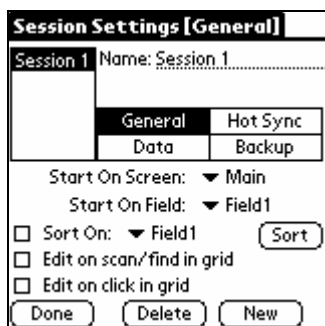


5. Configure your session's **General, Hot Sync, Data and Backup** attributes as described in **Sections 3.2.1-3.2.4**. When you are finished, press **Done**. If you do not need to modify the session, the default settings will be used and you can proceed directly to Field Settings, Chapter 4, if you wish to use default session settings.

3.2 Session Settings Explained

3.2.1 General Session Settings

General Session Settings are used to control the general operating characteristics of the session. These operating characteristics cannot be set at the field level.



Start On Screen

Select the screen the User will enter when they leave the TracerPlus Splash Screen. The user can choose between starting on the Main Screen or the Data Entry screen. Note that this option takes effect only when this session was the last one used – each session has its own settings.

Start On Field

Select the first field the User is focused on when **New** is selected from the data view screen. This setting is commonly selected to control what data must be entered when the program is initially opened.

Example: A session is created to capture package delivery information. Date and Time stamps are captured in fields 1 and 2. The bar-coded Package ID will be entered into Field 3. In this scenario the Start On is set to Field 3 since Field 1 and 2 are auto entered via automatic date and time stamps.

Sort On

Select a **Sort On Field** to optimize searching by allowing the user to select one field to store as the sorted field. To enable sorting, select the field you wish to sort on from the drop down list and click the check box.

Selecting an optimized sort field does not prohibit the user from searching on any other fields but those fields will not experience a noticeable improvement in search speeds.

Note: While the process dramatically improves search times for standard **Find** operations as well as the **Auto Find on Scan** operation used during data entry, when using very large datasets there may be a delay when starting the application for the first time or when switching sessions.

Important: The **Sort On Field** is used as the Key Field for a lookup table. It is required for the use of lookup tables. This field is used as a unique identifier for the records in the current session. When a selected field matches this **Sort On Field** (Key Field), data can be accessed from this session and placed in a lookup field of another session.

Edit on scan/Find in grid

Select **Edit on scan/Find in grid** to automatically open records in the data entry screen when a record is located using 'Find' or scanning on the main grid screen. Note that the Find Field affects which field's data is used for searching.

Example: A session is created to perform an inventory audit. The goal of the audit is to quickly find items in the TracerPlus database and compare the database values to the actual inventory levels. To speed this process, the **Edit on scan/Find in grid** setting is enabled. When an item is scanned in the find field and located in the database, the matching record is automatically brought up in the data entry screen for editing.

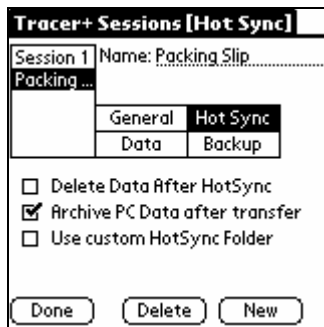
Edit on Click in Grid

A similar option for automatically editing a record is the behavior of editing a record immediately upon clicking it in the grid. Selecting this option is very useful for the user who is performing a lot of edits to existing data.

Note: When this option is selected, it is not possible to delete a single selected record from the grid. The user must turn this option off before being able to delete single records. The Delete All menu choice behavior is not affected.

3.2.2 HotSync Settings

HotSync settings are used to control how data is routed during HotSync to the PC.



Delete Data After HotSync

Select **Delete Data After HotSync** if the data should be removed from the PDA after a successful HotSync. Note that if data is not successfully transferred to the PC, as a safety precaution, it will not be deleted from the PDA even when this option is enabled.

Archive PC Data

Select **Archive PC Data** if you wish to archive any PC files transferred to the PDA during HotSync. Any data files sent from the PC are renamed with a prefix of "old_" after a successful HotSync if this option is selected. In a multi-user environment, many users would not select this option because it prevents any other user from receiving updated PC files. PC Files include both list contents as well as any session data needing upload to the PDA.

Note: Without this option, your upload files will be uploaded every time you perform a HotSync, which may cause the HotSync process to take longer than necessary.

Use Custom HotSync Folder (Pro version only)

If you wish to **HotSync** data to a specific folder on your machine, specify it here. This is especially useful if you are running automated processing scripts and have multiple users performing individual HotSync operations. This option allows you to have all users HotSync their data to a common location. The transferred filenames are changed to include the username that sent the data. An example of a filename using this option is **S01_data_johnsmith.txt**.

When the Custom HotSync Folder feature is used, the "ToPDA" folder is expected as a sub-folder of the specified Custom HotSync Folder. For more information about the ToPDA folder, refer to section 5.5 on uploading data to your PDA.

Note: If the specified Custom HotSync folder cannot be created, the data will be transferred to the default HotSync folder. If you are having trouble using this feature, double check the HotSync log file for any error messages after a HotSync.

3.2.3 Data Storage and Transfer Settings

Data settings are used to control the format of the session's data file sent to the PC during a HotSync.



Export As

This option allows the user to select from one of six possible data formatting types

Text (Tab delimited)

This formatting option embeds a <tab> character between every transferred field. Each record is terminated with a Carriage Return/Line Feed (CRLF)

Text (Comma delimited)

This formatting option wraps each field in quotation marks and separates each field with a comma. Each record is terminated with CRLF.

Text (Fixed Width)

This formatting option transfers all fields using a fixed width. Any space remaining at the end of Field data is padded with spaces. Use of the Max Length field setting is also used to dictate the width of each fixed width field. The maximum length of any given field is 30 chars. Each record is terminated with CRLF.

XML

This formatting option allows data to be transferred in XML format. This is very useful for customers when importing into existing systems.

HTML

This formatting option transfers all data in HTML table formats. This provides a formatted representation of the collected data that can be viewed as a web page.

Text (Comma, No Quote)

This formatting option separates each field with a comma. Each record is terminated with CRLF.

Append to Existing File

By default, TracerPlus appends new data to any existing data file on the PC. When this option is selected, the new data file is appended to the pre-existing file if it exists. If this option is not selected, any previously transferred data is deleted and a new file is created on each HotSync. A new file will be created if it does not exist regardless of this setting, however.

Send Non-Visible Fields

By default, TracerPlus does include non-visible fields in the data file. When this option is selected, non-visible fields will be sent to the PC. Refer to **Chapter 4** on how and when you might use this option.

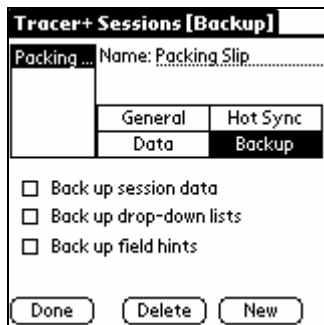
Include Field Names

By default, TracerPlus does not include field names in the HotSync data file. When this option is enabled, the user configured field names are provided in the generated data file. Depending on the file format, this is represented in different ways. For all of the text data transfers, the Field names are included as a header record, being transferred as the first line of the data file. For the XML and HTML formats, the field names are included in the general formatting of the data file.

3.2.4 Backup Settings

TracerPlus Backup options allow you to individually choose which types of files are backed up to a Palm Desktop backup location during each HotSync operation. These files may be useful to some users for enterprise wide deployment in addition to a simple backup file. Deployment of configured sessions from one PDA to many is discussed in more detail in Chapter 7. Any file type that is selected for backup will add a certain amount of time to the HotSync process so if backup of these files is not necessary, you have the ability to disable the backup setting.

Any of the databases created during a backup process can be loaded to any other PDA running TracerPlus 2.8 simply by double clicking the created file and selecting the appropriate user to receive it during that user's next HotSync. PTS also offers an enterprise deployment application included with your TracerPlus installation. This application allows for an easier method of distributing backup configuration files to multiple users simultaneously.



Note: Enabling these backup options can slow down your HotSync process considerably, since each time you HotSync a copy of the selected databases is made on your PC. You may want to enable these options, then HotSync, then disable them again once you have the copies made.

Backup Session Data

When this option is selected, the actual session **data** is backed up to your Palm Desktop backup location. An example of the location and filename for this option is C:\Program Files\Palm\[username]\backup\TP28-Data_S01_30.pdb where:

C:\Program Files\Palm = Palm Desktop install location

[username] = The PDA username of the current PDA.

TP28-Data_S01_30.pdb = The Palm database containing data records for a given session.

Backup Drop-down Lists

When this option is selected, any drop-down list databases used on the PDA are saved to the Palm Desktop backup location for the current user. The filename for this database is **TP28-List_SxxFyy.pdb** where:

xx = the Session number of the current session
yy = the Field number of the backed up list.

Note: Field Type must be set to **Drop-Down List** for the list database to take effect.

Backup Field Hints

When this option is selected, any created field hints are saved to the Palm Desktop backup location for the current user. The filename for this database is **TP28-Hint_Sxx.pdb** where:

xx = the Session number of the current session

3.3 Deploying Configured Sessions to Multiple Users

Please refer to **Chapter 7, Section 7.2** for a detailed look into how to deploy session configuration to your entire workforce.

Chapter 4: Field Settings

After a session is created, fields within that session may also require configuration. Before configuration, all available fields within the session are in a default state. TracerPlus Standard has 10 fields available for configuration and TracerPlus Professional has 30 available fields.

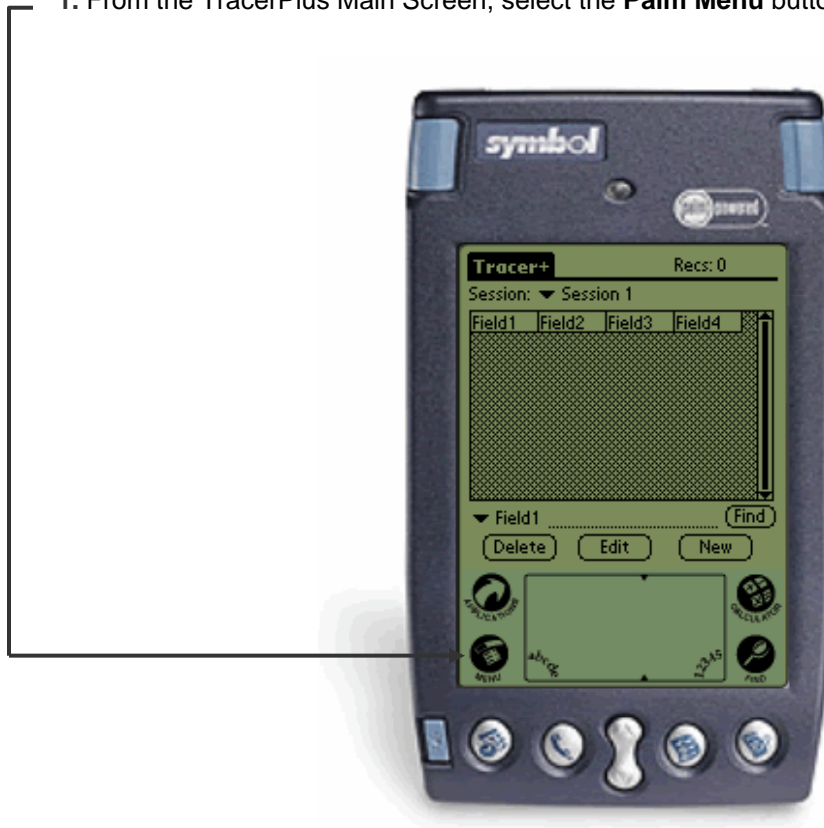
Customizing your session settings and field settings is not required, as the default settings will work perfectly for many users. However, to fully realize the power of TracerPlus, some of these settings may need modification for your specific needs. Proper field configuration may speed up data acquisition and may prevent data input errors, again, depending on your collection requirements.

In this chapter, you will learn how to set up fields for your specific application. **Section 4.2** explains the various TracerPlus field settings in more detail.

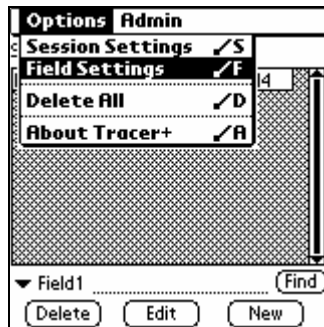
4.1 Configuring Field Settings

Below we go through the steps required to configure field settings.

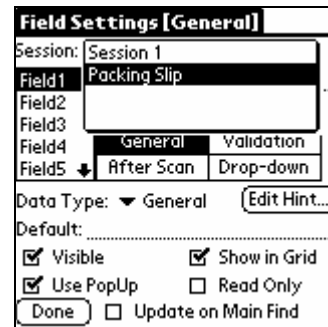
1. From the TracerPlus Main Screen, select the **Palm Menu** button.



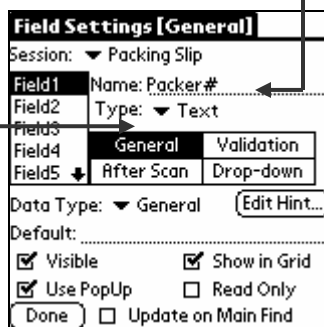
2. Select **Field Settings**.



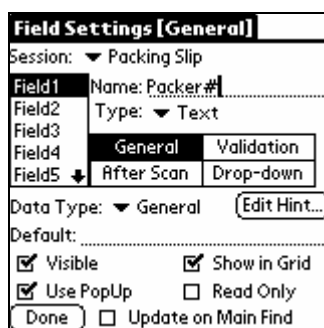
3. Select a TracerPlus session.



4. Select a field to configure.
5. Enter the field **Name**.



6. Select a **Field Type**. Section 4.2.1 discusses these field types in more detail.
7. Enter **General** field settings. Section 4.2.2 discusses these settings in more detail.

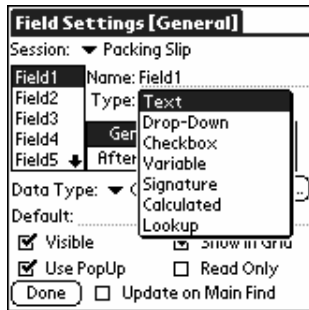


8. Enter additional field settings. Refer to Sections 4.2.3 through 4.2.5 for more detail on the other available field settings options.
9. Repeat steps 4-8 to configure additional fields.

4.2 Field Settings Explained

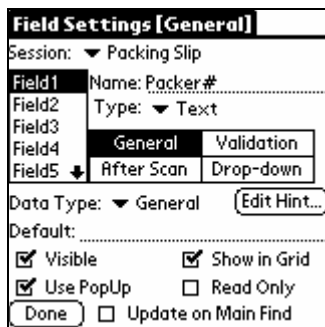
4.2.1 Field Types

The Field Type setting is used to control what type of data is entered for this field. TracerPlus Std. has four available Field Types: **Text**, **Drop-Down**, **Checkbox** and **Variable**. TracerPlus Pro has three additional types, **Signature**, **Calculated**, and **Lookup**.



Text

Text fields should be chosen when data is to be entered via a bar code, keyboard, or graffiti. The Text type does not restrict input in any way, and can store up to 30 characters.

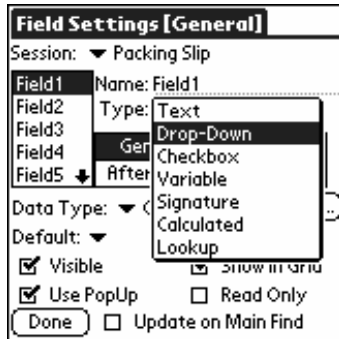


Drop-Down

Drop-Down fields allow the user to select from a pre-defined list of items. Drop-Down fields offer a quick, error free way to enter data from a select list of choices. Section 4.2.5 provides more detailed information regarding drop down lists.

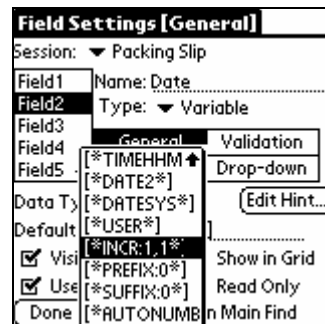
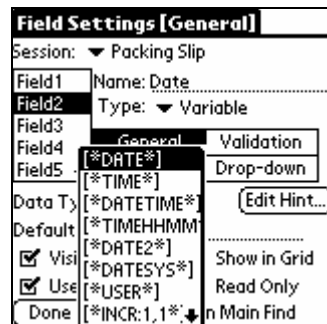
Check Box

Check box fields are used when simple Yes/No, True/False, On/Off selections are made. Check boxes should be used whenever possible to speed data entry, and limit data entry error.



Variable

Variable fields are used to automatically enter values such as Time and Date. To set a Variable field the user selects the value they would like to enter in the field from the drop down menu. The selected setting will then appear in the “Default” field value in the Settings screen. By default, **Variable** field values are populated when the record is first created. To update the variable each time it is submitted, simply enable the **Update Variables** option for that field. Refer to Section 4.2.4 for more information regarding **Update Variables**.



DATE

When **DATE** is selected the current date is automatically entered in the field in the **mm/dd/yyyy** format (i.e. 05/07/2003).

TIME

When **TIME** is selected the current time is automatically entered in the field in **hh:mm:ss** military format (i.e. 19:19:55).

DATETIME

When DATETIME is selected, the current date *and* time are automatically entered in the field in the mm/dd/yyyy hh:mm:ss format (i.e. 05/07/2003 13:14:55).

TIMEHHMM

When TIMEHHMM is selected the current time is automatically entered in the field in the hhmm format (i.e. 0915). The first two digits represent the hour the next two digits represent the minutes past the hour.

DATE2

When DATE2 is selected, the current date is automatically entered in the field in the yyyy-mm-dd format (i.e 2003-05-07)

DATESYS

When DATESYS is selected, the current date is automatically entered in the field in the same format as you have chosen in system prefs. This option gives you the greatest flexibility. To select a date format, click on “Home” and then “Prefs”, and choose “Formats” from the upper right-hand menu.

USER

When USER is selected, the current PDA User ID is automatically entered in the field.

INCR:1,1

When INCR:1,1 is selected, the field is set to be an auto-incrementing field. The first digit represents the starting value while the second digit represents the increment value. The default setting INCR:1,1 starts the record as a value of 1 and increments by 1 for every following scan of a previously scanned barcode. This feature can automate a lot of data entry tasks that involve counting items.

This field setting option is dependent on the Auto Find on Scan Field setting. Refer to the appropriate Field settings section of this manual for more information in this area.

The INCR variable type can also be used to count backwards by setting the second number to a negative value. For example, INCR:10,-1

PREFIX:0

When PREFIX:0 is selected, any data entered in the field will be prefixed with the set value. The default setting, PREFIX:0, will prefix any scanned data with a 0. Changing the default of ‘0’ to any other value will instead prefix your scanned data with that value. Only data entered via a scan event will be prefixed.

SUFFIX:0

When SUFFIX:0 is selected, any data entered in the field will be suffixed with the set value. The default setting, SUFFIX:0, will suffix any scanned data with a 0. Changing the default of ‘0’ to any other value will instead suffix your scanned data with that value. Only data entered via a scan event will be suffixed.

AUTONUMBER:0

When AUTONUMBER is set the fields value will automatically be set to the next sequential number starting at 1. This field can be adjusted to start at whatever number is desired by the user by simply changing the 0 to the appropriate number.

Field Parsing

Field Parsing gives TracerPlus users the ability to grab pieces of data from one field and place them into another field. To configure field parsing simply select **Variable** from the **Type** drop down and in the default value you specify the field you would like to parse and the delimiters, using the **Parse String Format** shown below.

Parse String Format:

F (field index) [(direction) , (1st delimiter) , (2nd delimiter)]

Field index

The field index is used to determine the field to be parsed. To specify the field index enter the character 'F' followed by the field index value. For example, the user would like to parse field 5, the value F5 would then be entered into the default value field.

Direction

The parsing direction allows the user to specify the direction of the parse. Possible options are a left-to-right, or right-to-left parse. If a right-to-left direction is entered the parse will begin from the right side of the string. A parse direction is specified immediately after the first open bracket, an 'L' specifies a left-to-right parse, and an 'R' specifies a right-to-left parse.

Note: Leaving the direction out of the parse string will default it to left-to-right.

Possible Delimiters

After the field index and direction of parse have been specified the next items are the delimiters. Possible delimiter types include: Index positions, character delimiters, and ASCII codes. The parse string must contain two delimiters, a start delimiter and an end delimiter separated by a comma.

Index position

The index position delimiter is simply the location in the string you would like to set as a delimiter. To set an index position delimiter enter the index value of the delimiter in the parse string. This type of delimiter is useful if you know exactly where the delimiter is located on every string you would like to parse.

Character delimiters

Character delimiters allow users to parse based on the location of specified characters, such as percentage signs and question marks. To specify a character delimiter enter the character you would like to use within quotation marks. If the string you are using has multiple characters specify the index character count before the character delimiter. For example, a user would like to grab data between the first and second \$ sign, the start delimiter will be "\$", and the end delimiter will be "2\$".

Hint: The ? can be used without quotation marks to mark the delimiter as the end of the string. For example you would like to parse field 1, from the first '%' to the end of the string use the following Parse string:

Default value: **F1["%", ?]**

ASCII delimiters

It is also possible to specify ASCII delimiters. This allows users to specify characters such as tabs and line feeds as delimiters. To use an ASCII value as a delimiter enter a forward slash followed by the two digit ASCII code within quotation marks. For example, to specify a tab as a delimiter use "/09".

Parsing example:

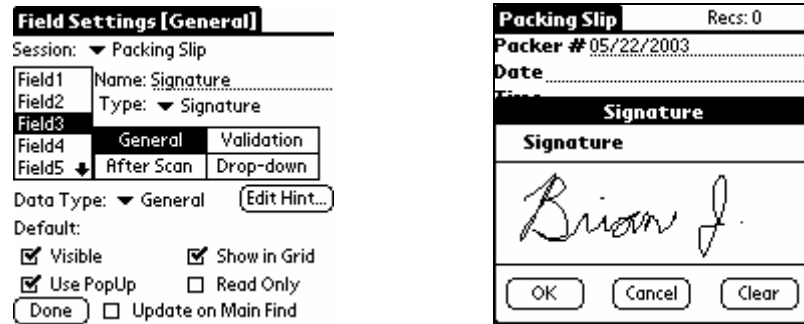
In Field 2 you would like all the characters between the first and second '%' of barcode 123%456%789 scanned into field 1.

1. Select **Field2** in General Field Settings.
2. Select **Variable** from the **Type** drop down.
3. Enter **F1["%", "2%"]** in the **Default Value** field for Field 2.

This will now enter the value **456** in Field 2 on a successful scan, or when the down key is pressed.

Signature (Pro Version Only)

When a Signature Field Type is selected, the user is prompted for a signature when the field is tapped. Signatures collected in a Signature field are HotSynced to the PC in a bitmap format. All signature files transferred during HotSync are located in a **signatures** subfolder of the HotSync data transfer folder. If you happen to be using **PTS ODBC Link for TracerPlus**, these signatures are also placed directly into the database if you configure your database field type appropriately.

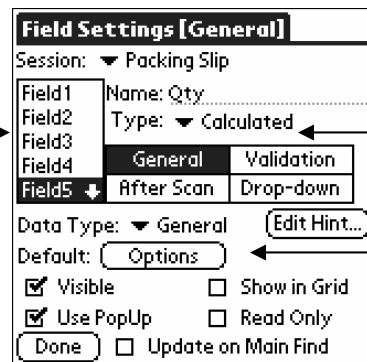


Calculated (Pro Version Only)

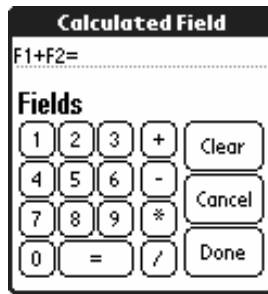
A **Calculated** field is used to perform simple mathematical operations between fields. This is useful for invoicing or mobile receipt printing. With calculated fields you can add, subtract, multiply or divide two fields.

Configuring a Calculated Field

1. Select the field you would like to configure.
2. Select Calculated from the Type drop down.
3. Click on Options in the General Field Settings.
4. The Calculated Field Options Dialog is shown.



Calculated Field Options Dialog



From the **Calculated Field Options Dialog** you can configure a calculated field to be the result of 2 or more fields. To configure simply use the numeric keypad to enter the field numbers along with the operations.

Calculated Field Example

A TracerPlus user would like Field 4 to be the Result of Field1 + Field2 * Field3.

1. Select **Field4** in General Field Settings.
2. Select **Calculated** from the **Type** drop down.
3. Press the **Options** button.
4. From the **Calculated Field Dialog** Press the following **1, +, 2, *, 3, =**
5. Press **Done**.

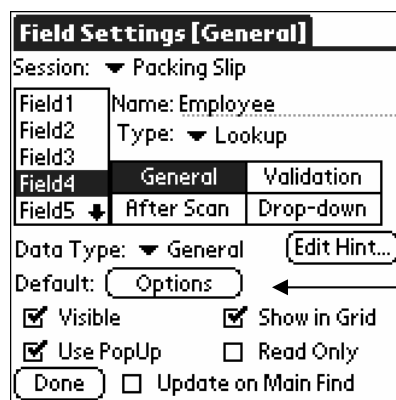
From the **Entry** screen this calculation will now be performed on a successful scan, or when the down key is pressed.

Lookup Fields (Pro Version Only)

A Lookup field is populated with data from another session. When properly configured, a Lookup field matches a value in the current session to the **Sort On Field** (Chapter 3) of another session. If that record is found in the lookup session, the assigned field data is populated in the current session's assigned field. As an example, this could be a customer name based on an entered customer number, or a part description based on an entered part number.

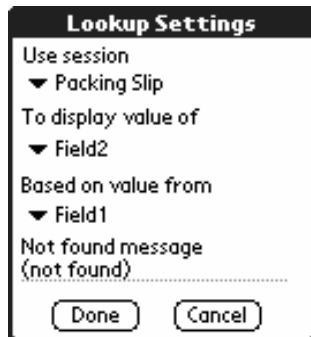
To configure a Lookup field select **Options** in the General Field Settings screen.

1. Select **Options** from the General Field Settings.



2. Then configure the following settings.

Lookup Settings



The screenshot shows a dialog box titled "Lookup Settings". It contains four configuration sections, each with a label and a dropdown menu:

- Use session**: A dropdown menu with "Packing Slip" selected.
- To display value of**: A dropdown menu with "Field2" selected.
- Based on value from**: A dropdown menu with "Field1" selected.
- Not found message**: A text input field containing "(not found)".

At the bottom of the dialog are two buttons: "Done" and "Cancel".

Use Session

From this drop down select the session you would like to get data from.

To display value of

Use this drop down to select the field to display from the selected **Use Session** session

Based on value from

This drop down is used as the comparison field. The session which you are currently configuring uses this field to match against the **Sort On Field** of the session selected from the **Use Session** drop down list.

Note: The source session for this lookup field must have the properly configured Key field as described in **Chapter 3: Session Settings**.

Not found message

Configure this option to display a custom message if matching data is not found in a lookup table.

4.2.2 General Field Settings

General Field Settings allow the user to define the most basic field attributes. These settings allow a TracerPlus user to remove visibility of a field, establish default values, numeric only fields, and read only fields.

Data Type

The **Data Type** represents the format of the expected data for the selected field.

Field Settings [General]

Session: ▼ Packing Slip

| Field | Name | Type | General | Validation |
|--------|----------|------|------------|------------|
| Field1 | Packer # | Text | General | Validation |
| Field2 | | | | |
| Field3 | | | | |
| Field4 | | | | |
| Field5 | | | After Scan | Drop-down |

Data Type: General (Edit Hint...)

Default: Numeric

☒ Visible ☐ Numeric in Grid

☒ Use Popup ☐ Read Only

Done ☐ Update on Main Find

General

General is set to accept all data types in a field, including date time stamps.

Numeric

Numeric is set when the field is only used for numeric data. When a field's Data Type is set to Numeric, it does not accept any Alpha characters.

Date

Date is set when the field is used to enter dates.

Time

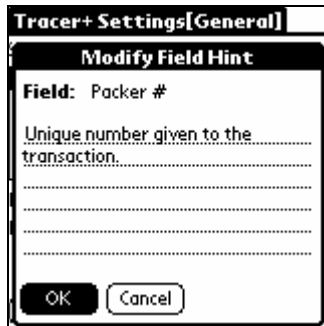
Time is set when the field is used to enter times.

Note: Time data is always stored in military format.

Edit Hint (Pro Version only)

When **Edit Hint** is selected a field Hint can be entered as reference for the chosen field in the provided memo space. This feature is used to provide reference details about the information being captured in a particular field. To view a field **Hint** a user taps the field label in the data entry screen.

Note: Field Hints may also be uploaded from a text file on your PC. See section 5.8.4 for more information on this feature.



Default

The **Default** represents the value that is initially used for the selected field. For example, you may set up one of your fields to represent a quantity. Likewise, you might want to set the **Default** for that field to be 1.

Note 1: The **Default** value is only used when the **Clear on Submit** option in the **After Scan** menu is selected for this field. If the user changes this value during data entry and Clear on Submit is not checked, the changed value is retained for the next record.

Note 2: If the user clicks the **Clear All** button from the data entry screen, this value is cleared, as well.

Default values can also be entered using **Variable** field settings. Refer to Section 4.2.1 for more information.

Visible

This option is normally selected and allows a field to be viewed or hidden in the data entry screen. A field's visibility should be turned off when it is not being used in a session or if the default contents need to be stored but not seen by the user as in some cases of Date/Time stamping of an individual record.

Show in Grid

When **Show in Grid** is selected, the field is visible in the Main Screen grid. A maximum of 4 fields is available for display in the grid. Only the **first** 4 fields with this option set on are displayed. Subsequent fields with this option set on are ignored. Fields are displayed in their numeric order in the grid.

Use Popup Dialog

This option is only valid when the Data Type for a field supports it. Currently, only **Date, Time and Numeric** Data Types allow for a Popup dialog. This option is ignored in all other Data Type settings. When a valid field is tapped with this option selected, a popup dialog appears. Samples of the 3 different popup types are shown below.

Date Popup Dialog

Time Popup Dialog

Numeric Popup Dialog

Numeric Popup Dialog Button Definitions

- : Subtracts 10 from the Qty.
- : Subtracts 1 from the Qty.
- ++ : Adds 10 to the Qty.
- + : Adds 1 to the Qty.
- Done : Enters the Qty. and returns the user to the data entry screen.
- BS : Backspace
- C : Clears the current entry
- Cancel : Clears the current entry and returns the user to the data entry screen.

NOTE: to enter a **decimal point**, double-tap in the Graffiti area.

Read Only

When the **Read Only** option is selected, the user does not have the ability to enter data in the selected field. This is commonly used in conjunction with default values and **Variable** type fields.

Update on Main Find

When the **Update on Main Find** option is selected, records found from the main screen will automatically have their variable fields updated.

4.2.3 Validation Field Settings

Validation Field Settings allow the user to exhibit controls that check the accuracy of the entered data.

Chapter 4: Field Settings

Validate Immediately

This option represents whether or not a field should be validated immediately after it is entered. When **Validate Immediately** is not selected and **Validation** settings do exist, the field data will still be validated when the record is submitted.

Unique In Record

When selected, this option prevents duplicate data values within the current record. If a field is submitted and it violates the **Unique In Record** setting, an audible alarm and error message is displayed.

Unique In Table

When selected, this option prevents the user from entering duplicate data within the entire session for this field. This does not prevent the same data from being entered into another field within this session, however. If a field is submitted and it violates the **Unique In Table** setting, an audible alarm and error message is displayed.

Must Match

This option allows the user to validate an entry versus an entry made in another field. If a field is submitted and does not match the **Must Match** field, an audible alarm and error message is displayed.

Min Len

This option allows the user to validate an entry based on the minimum number of characters required. If a field is submitted with less than the “**Min Len**” setting, an audible alarm and error message is displayed. Setting a Min Len of 1, for example, prevents the user from leaving that field blank.

Max Len

This option allows the user to validate an entry based on the maximum number of characters allowed. If a field is submitted with more than the “**Max Len**” setting, an audible alarm and error message is displayed. Specify a Max Len of zero to disable this rule. Fields in TracerPlus can store up to 30 characters.

4.2.4 After Scan Field Settings

After Scan field settings are designed to increase data entry speed and accuracy. Repetitive data capture scenarios such as inventory audits lend themselves to the efficiencies of these settings. It is recommended that these features be activated whenever possible.

NOTE: The ‘**After Scan**’ rules are triggered by both a completed barcode scan as well as pressing the **Down Arrow** key on your PDA.

Tracer+ Settings [After Scan]

Session: ▼ Packing Slip

Field1 Name: Packer #

Field2 Type: ▼ Text

Field3 General

Field4 Validation

Field5 ▼ After Scan Drop-down

☐ Auto Submit ☒ Clear on Submit

☐ Auto Find on Scan

☐ Update Variables

Go To: ▼ Field2

Done

Auto Submit

This option represents whether or not to automatically submit this record following an **'After Scan'** event for this field. If this option is chosen for the selected field, the system automatically submits the record and sets the focus to the field selected in the **Go To** prompt for the selected field. The form is then ready for a new record.

Clear On Submit

This option is used to tell the system whether to clear the selected field after submitting the current record in the Entry screen. If the current record is submitted as a result of an **'After Scan'** event or by clicking the **Submit** button, all the fields with this option selected are cleared. If the field has a Default Value, that value is used instead of a blank entry. Turning off Clear On Submit is especially useful if several records in a row will share a value for a field – it saves the user the time of re-entering the same data when entering several new records.

Auto Find on Scan

When **Auto Find on Scan** is selected, the database will search the session table for a record with a matching value in that field. If a matching value is found, the data entry screen is populated with that record data and the user is immediately put into edit mode. If a matching value is not found, a new record is created. The Auto Find on Scan is triggered when a barcode is scanned, or when the user presses the Down Arrow key after manually entering data in that field.

Update Variables

When this option is selected, Variable field data is updated to represent the variable value at the time that the record was **submitted** as opposed to the default operation of using the time that the record was **created**. This is really only relevant for date/time based variable settings and should usually be turned off in any other variable field. This is useful when you want to track the date/time a record was edited, rather than created.

Go To

This option allows the user to control the **'tab order'** for the selected field. After a user performs a successful scan while in the focus of the selected field, the system sets the focus to whichever field is selected as the **Go To** Field. The user typically uses this feature to control the **'flow'** of data entry. Alternatively, the Down Arrow key represents an **'After Scan'** event for those PDAs that are not barcode enabled.

4.2.5 Drop-Down Lists

Drop Downs allow TracerPlus users to create their own **Drop-Down** list menus for specific fields. TracerPlus gives the user the ability to create these lists either directly on the PDA or from a file on the PC via a HotSync data transfer.

Tracer+ Settings [Drop-down]

Session: ▼ Packing Slip

| Field | Name | Type | General | Validation |
|--------|----------|------|---------|------------|
| Field1 | Packer # | Text | | |
| Field2 | | | | |
| Field3 | | | | |
| Field4 | | | | |
| Field5 | | | | |

☒ Allow PC Update

Chapter 4: Field Settings

Allow PC Update

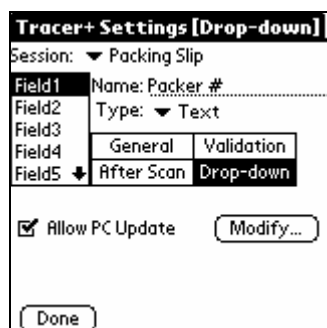
This option allows the user to create drop-down lists on the PC. During HotSync these lists are loaded into the field and overwrite any existing drop-down information saved on the PDA. For this reason, we offer the ability to disable the PC Update option. This gives the user the ability to avoid accidentally overwriting any existing list information created on the PDA.

If you wish to allow list contents to be uploaded from the PC for a particular session and list, this option should be checked. If you wish to prohibit the PDA from getting updated list contents from the PC, simply uncheck this option. **Chapter 5** refers to PC Operations in more detail. Please refer to that section for more detail regarding list updates from the PC.

Modify

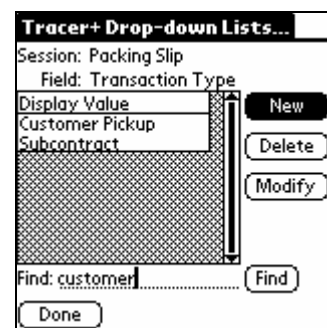
Select the **Modify** button to directly edit the list contents on the PDA. We discuss the steps in creating drop-down list items in the following section.

1. Select **Modify**.



The screenshot shows the 'Tracer+ Settings [Drop-down]' screen. It has a 'Session:' dropdown set to 'Packing Slip'. Below it are fields for 'Field1' (Name: Packer #), 'Field2' (Type: Text), 'Field3', 'Field4' (General, Validation), and 'Field5' (After Scan, Drop-down). At the bottom, there is a checked 'Allow PC Update' checkbox and a 'Modify...' button. A 'Done' button is at the very bottom.

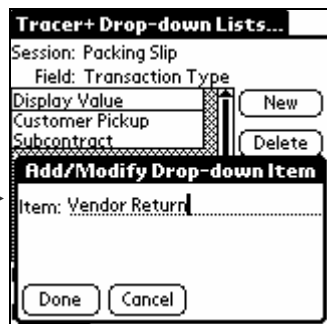
2. Select **New**.



The screenshot shows the 'Tracer+ Drop-down Lists...' screen. It has a 'Session:' dropdown set to 'Packing Slip' and a 'Field:' dropdown set to 'Transaction Type'. A list of items is shown: 'Display Value', 'Customer Pickup', and 'Subcontract'. To the right of the list are buttons for 'New', 'Delete', and 'Modify'. At the bottom, there is a 'Find:' field with 'customer' entered and a 'Find' button. A 'Done' button is at the very bottom.

3. Enter a List Item via barcode scan or Graffiti.

4. Repeat steps 2-3 to add additional list items.



The screenshot shows the 'Add/Modify Drop-down Item' screen. It has a 'Session:' dropdown set to 'Packing Slip' and a 'Field:' dropdown set to 'Transaction Type'. A list of items is shown: 'Display Value', 'Customer Pickup', and 'Subcontract'. To the right of the list are buttons for 'New' and 'Delete'. Below the list is a text field labeled 'Item:' with 'Vendor Return' entered. At the bottom are 'Done' and 'Cancel' buttons.

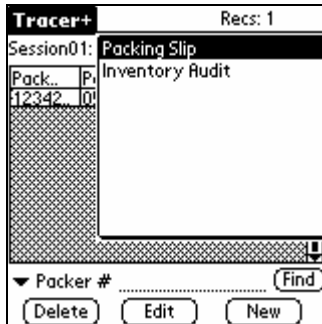
TracerPlus **List Items** can be edited and deleted in the TracerPlus **Lists** screen. Simply choose the value to be edited and select the appropriate button.

NOTE: List Items may also be deployed to multiple users. In most multi-user cases, the PC update option would be used, but it is also possible to create a list on one PDA and distribute to your entire mobile work force. Refer to Chapter 5 for more information regarding this powerful feature.

Chapter 5: Managing Data

5.1 Entering Data

To enter data in TracerPlus, the user must first select the appropriate session. Once that is selected, clicking the **New** button will start the data entry/collection process.



The screenshot shows the 'Tracer+' application window. At the top, it says 'Recs: 1'. Below that, 'Session01: Packing Slip' is displayed. A table with two columns, 'Pack.' and 'P.', contains one row with the values '12342' and '0'. To the right of the table is a large empty box labeled 'Inventory Audit'. At the bottom, there is a 'Packer #' field with a 'Find' button next to it. Below that are three buttons: 'Delete', 'Edit', and 'New'.

Entry Screen

The **Entry Screen** is the area where the user enters data. The fields are presented to the user with the customized fields as they were configured. The user enters data for each field presented. When the data is being scanned, the system controls the flow to the next field based on the Field Settings previously set up. This screen contains three buttons. These are discussed below.



The screenshot shows the 'Packing Slip' entry screen. At the top, it says 'Recs: 0'. Below that, the following fields are displayed: 'Packer # 345', 'Date 05/06/2003', 'Time 10:18:03', 'Employee Joey M', 'Qty 12', 'Part # 34-55-4578', and 'Signature (tap to sign)'. At the bottom, there are three buttons: 'Done', 'Submit', and 'Clear All', followed by a small diamond icon.

Done Button

Click the Done button when you have finished entering data and would like to return to the Main Screen. You will be prompted as to whether you would like to save the last record. Answer appropriately. You will now be returned to the Main Screen.

Submit Button

Clicking the Submit button submits the current record to the database. After clicking this button, the focus is set to the field that was set as the Session Start On field. Refer to Section 3.2.1 for more information on setting a Start On field.

Clear All Button

Clicking the Clear All button clears all data from all fields for this record. Notice that the focus does not change after clicking this button. Also notice that any Default values selected in the Field Settings are not recognized.

Refresh Button



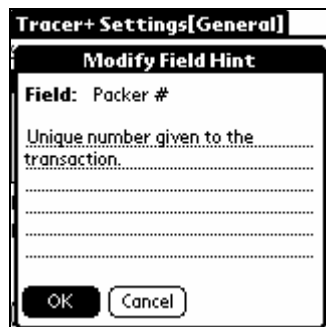
Chapter 4: Field Settings

The refresh button is displayed to the right of any **Lookup** or **Calculated Field**. When this button is pressed a refresh of this field is performed using the appropriate logic for that field.

Note: A lookup and re-calc is also performed on a successful scan or down arrow key press.

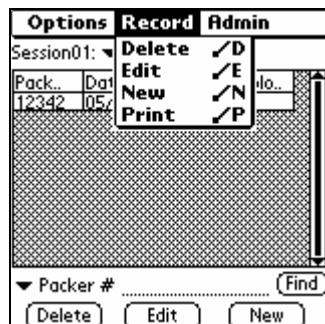
Field Hint (Pro Version Only)

Clicking any field's label will open the field's Hint window. The Hints window displays reference details that aid in data collection. Sections 4.2.2 explains how to create and edit field Hints.



5.2 Editing Data from the Main Screen

The **Main Screen** is the area where the user can review, edit and search for records previously entered. The user can delete or edit a record by selecting it and then tapping a function key or selecting a function from the **Record** menu. For more information on searching for records review **section 5.4**.



Delete

Click the Delete button or select Delete from the Record menu to delete the selected record.

Edit

Click the Edit button or select Edit from the Record menu to edit the record in the Data Entry screen.

5.3 Quick Buttons

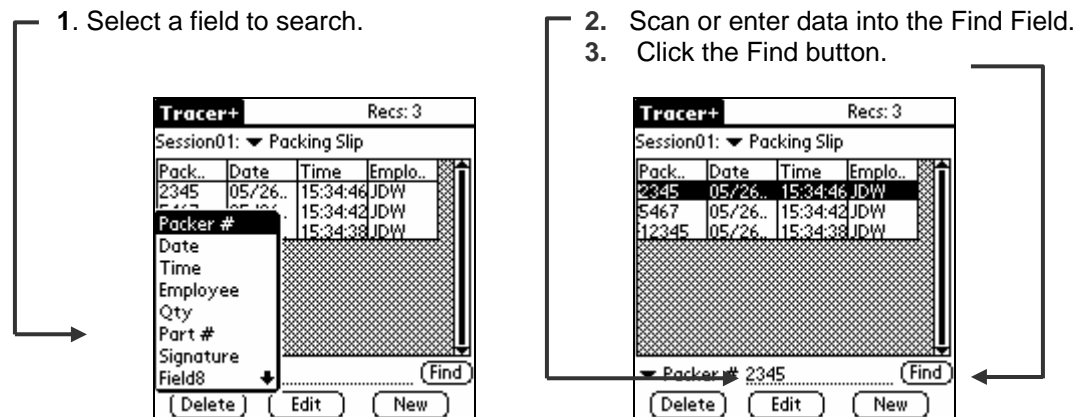
TracerPlus specializes in streamlining screen interaction. We do this through implementation of several unique features. This allows for very fast and accurate data entry. One of the features to aid in this is using the **Up/Down** keys on your PDA.

The **Up Arrow** key allows the user to move up one field on the **Entry Screen**. Note that this does not follow the 'Go To' field settings. It simply moves up one field on the **Entry screen**)

The **Down Arrow** key allows the user to move down one field in the **Entry Screen**. The **Down Arrow** key is actually used to trigger the '**After Scan**' rules and TracerPlus behaves just like it would after receiving a valid barcode scan. If, for example, the **Auto Submit** flag is enabled for the current field, and the user presses the **Down Arrow** key, the current record is submitted and all of the After Scan field settings for the field are respected; including the 'Go To' Field. This is especially useful for the users that do not have a barcode enabled PDA.

5.4 Finding Data

While in the Main Screen, TracerPlus users can search the session database by using the **Find** feature. Follow the directions below to use the find feature.

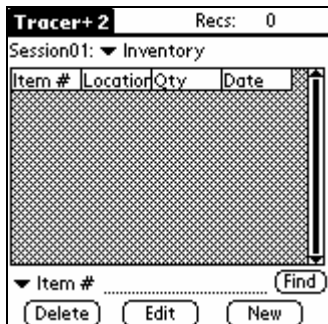


If you are manually entering data, you must click the **Find** button. If you are scanning data, this is done automatically when you scan a barcode value. Additionally, there is a session setting that enhances the operation of this **Find** feature. Using Session settings, you may set the option to **Edit on Find**. Refer to section 3.2.1 for more information regarding these settings.

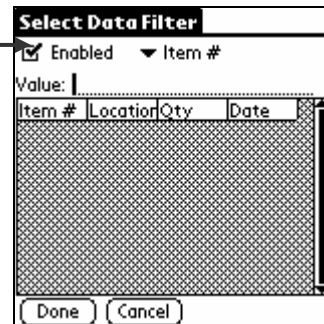
5.5 Filtering

This option enables TracerPlus users to filter the database to only records that match a specific field value. By enabling filtering, users can refine data collection tasks including asset management, order management and shipping. Follow the directions below to use the **Filtering** feature.

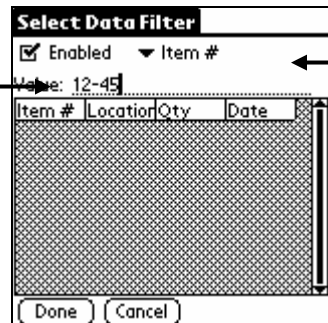
1. Tap the **Recs** label in the Data View screen.



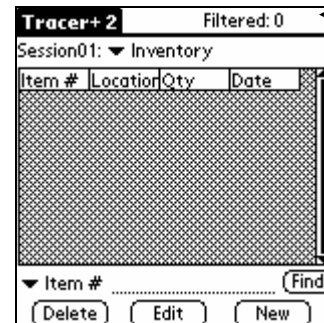
2. In the Select Data Filter screen Check **Enabled**.



3. Select the filtered field from the field list drop down.
4. Enter a Value to filter on.
5. Tap **Done**.



6. Only filtered Records are viewable or editable. Note: The **Recs** label has been replaced by a **Filtered** label



5.6 Printing Data

Printing from the DataView Screen

When TracerPlus Print is licensed, a record can be printed by selecting **Print** from the Record menu in the Data Entry Screen or by using the standard Palm Graffiti shortcut for printing, shown next to **Print** in the menu. The Data will print per the format uploaded to the PDA as described in section 6.1.3 .



Auto Print on Record Submit

When TracerPlus Print is licensed, a record can be printed automatically when submitted. This setting is set in the Printer External Device Settings. See section 6.1.1 for details. The Data will print according to the format uploaded to the PDA as described in **section 6.1.3**.

5.7 Managing Data from the PDA to the PC

TracerPlus comes with a HotSync conduit allowing easy transfer of collected data via the standard Palm Desktop HotSync process. This section outlines all of the features available for PC processing.

5.7.1 How Data Is Sent to the PC

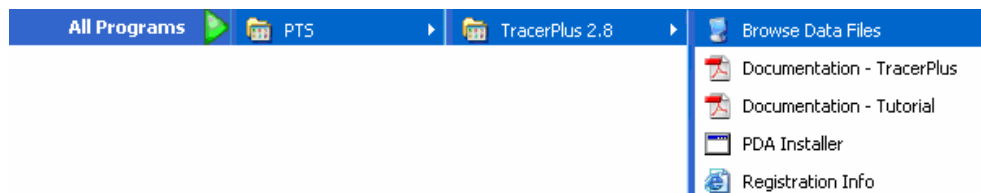
TracerPlus transfers all session data to the PC via the standard HotSync™ process. The PTS installation provides a shortcut for accessing your data folder. This shortcut is available from the **Start Menu→Programs→PTS→TracerPlus 2.8→Browse Data** link. This link provides you access to all of your users and their data. Each session defined on the PDA generates its own independent data file. These files are appropriately named using the session number of each given session.

You can see the session number of any given session via the TracerPlus Main Screen or in the Session Settings dialog screen on the PDA. These numbers typically follow the order in which each session was created but this is not always the case. It is important to note what these session numbers are when looking for your data. The filename for each session is **Sxx_data.txt** where **xx** = the session number for that session.

For example, if you have 2 sessions defined on the PDA, the first session listed would generate a file named **S01_data.txt** and the second defined file generates a file named **S02_data.txt**.

5.7.2 Viewing Data Files on the PC

Data files sent to the PC can be quickly viewed by selecting **Start Menu→Programs→PTS→TracerPlus 2.8→Browse Data** and then selecting the user's data you wish to view.



5.7.3 Linking TracerPlus Session Data to an MS Access Table

Microsoft Access is an affordable and popular database that can be utilized to manage TracerPlus data. To import TracerPlus session 1 data, file name **S01_data.txt**, follow these steps:

2. In MS Access, open your database or create a new database.
3. Select File.
4. Select Get External Data.
5. Select Import.
6. In the Import dialog box, select Files of type: Text files (*.txt).

7. In the file name list box enter S01_data.txt.
8. Select Import.
9. Follow the Import Wizard steps to complete the import.

PTS also offers an add-on product to directly connect to your ODBC database (including MS Access) that may be a better solution for many users. This application is discussed in more detail in section 5.7.5, or visit www.ptshome.com for more details about **ODBC Link for TracerPlus**.

5.7.4 Linking TracerPlus Data to an MS Excel Worksheet

MS Excel allows text files to be opened directly in Excel. Following just a few simple wizard dialog screens allows most users to painlessly view their data in an easy to read MS Excel worksheet.

1. In MS Excel, select File→Open.
2. Browse to the TracerPlus generated text file.
3. Select the file and Click **Open**.
4. Answer any questions regarding the type of data file as is appropriate.
5. You should now see your TracerPlus data displayed in MS Excel in a familiar spreadsheet format.

5.7.5 Using PTS ODBC Link for Tracer+ to Control Data

PTS also offers an application that provides a direct connection to any ODBC data source. The configuration of the connection and field mapping information is done from a simple text file. Many of our users have found this to be the most efficient method of collecting and storing data on their PC. This application is available for free trial download from our website at <http://www.ptshome.com> -- look for "ODBC Link for TracerPlus."

5.8 HotSyncing Data from the PC to the PDA

TracerPlus allows you to send databases from the PC directly to your TracerPlus sessions on the PDA. Our customers find this an invaluable tool and utilize it many different ways. For example if an inventory control manager needs to distribute pick lists he simply saves the inventory file to the **\ToPDA** folder for later import. If a maintenance manager needs to distribute jobs, he distributes the job files to the maintenance personnel's **\ToPDA** folder. The scenarios in which this feature can be used are limitless!

Many of our customers connect their TracerPlus sessions with 3rd-party databases to give their current systems added functionality. By exporting their databases from Microsoft Access, Excel or any other database, these data files can easily be created and distributed.

5.8.1 Sending Session Data to the PDA

All data prepared for upload to the PDA must be stored in a folder called **ToPDA**. This folder must be located under the **TracerPlus\Data** folder where TracerPlus was installed, and inside the folder for the current user. These folders are automatically created after HotSyncing. An example of what the data location of this folder might look like is

C:\Program Files\PTS\TracerPlus\Data\JohnSmith\ToPDA.

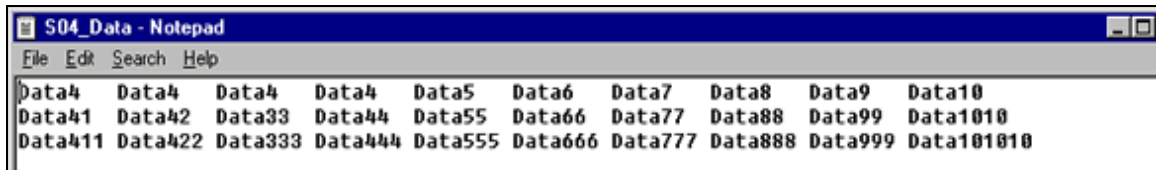
Note: If you are using the Custom HotSync Folder feature (Pro version only), the **ToPDA** folder will be located in the Custom HotSync Folder you specified under Session Settings→HotSync

TracerPlus allows tab-delimited files to be sent from the PC to the PDA. The data file must be named exactly the same as the data generated by the HotSync process. So, for example, if you want to upload data for Session 2 on the PDA, the filename must be **S02_data.txt** and must be located in the **ToPDA** as described above.

The required file definition for sending session data from the PC to the PDA is as follows. **<CR>** indicates a carriage-return (line break), and **<tab>** indicates a tab character.

```
Field1<tab>Field2<tab>Field3<tab>....Field9<tab>Field10<CR>
Field1<tab>Field2<tab>Field3<tab>....Field9<tab>Field10<CR>
```

Below is a sample data file prepared for upload to a TracerPlus session.



A sample upload session file is located with this install. If you wish to test the functionality of this feature, simply place that sample file in the **ToPDA** subfolder and set its name to the appropriate session.

Note: If you define data for a session number that does not exist on the PDA, it will be ignored.

Note for New Users of Windows: Some versions of Windows will not display the file extension (e.g., ".txt"). On those systems, if you save a file as "**S01_data.txt**", it will actually store the file as "**S01_data.txt.txt**". This file will not be recognized by TracerPlus. To check the actual name of a file you've created, right-click on it in Windows Explorer and choose "Properties".

5.8.2 Creating Session Data Files with Excel

To create a session data file with Excel, follow these steps.

1. Open the file in Excel
2. Select **File** from the Menu bar
3. Select **Save As**
4. In the Save As dialog box, select **Save As Type:** Text (Tab Delimited)
5. Save your session to
C:\Program Files\PTS\TracerPlus\Data\username\ToPDA\S01_data

Note: If you are using the Custom HotSync Folder setting, save the file to the Custom HotSync folder, under the \ToPDA folder.

6. Close the Excel file
7. Perform a HotSync to upload the data file to the PDA

Chapter 5: Managing Data

5.8.3 Sending Drop-Down Lists to the PDA

TracerPlus also allows the user to prepare and manage Drop-Down lists on the PC for later upload to the PDA running TracerPlus. The filename of list data to be uploaded must be named **SxxFyy.txt** where

xx = the session number

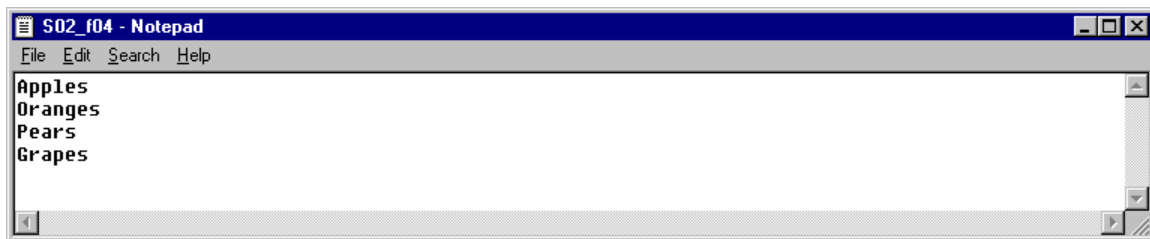
yy = the field number

For example, if you want to send the list contents for session 2 in the 4th field, the filename must be named **S02F04.txt**.

Note: Simply sending the list contents for a particular session and a particular field does not automatically define that field as a drop down list. This must still be set in the **Field Settings** screen of the PDA application. Please refer to **Chapter 4** for instructions on setting field properties.

The format for the list files is very simple. Each list element must be stored on its own line. Since there is only one field, there is no need for a **<tab>** delimiter between fields.

A sample of what this data must look like is as follows.

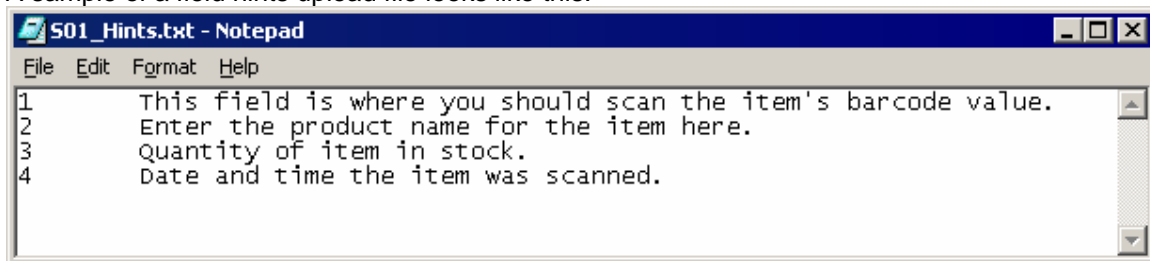


A sample upload list file is located with this install. If you wish to test the functionality of this feature, simply place that sample file in the **ToPDA** subfolder and rename it to the appropriate session number and field number.

5.8.4 Sending Field Hints to the PDA (Pro version only)

In addition to editing the Field Hints on your PDA, you can upload them from a text file on your PC. To do this, create a text file with one line per hint. The format of the file is as follows, one line per field: **Field Number<tab>Field Hint** – where **<tab>** is a tab character.

A sample of a field hints upload file looks like this:



Place this file in the **ToPDA** folder in your HotSync folder and it will be uploaded during the next HotSync operation.

Chapter 6: External Devices

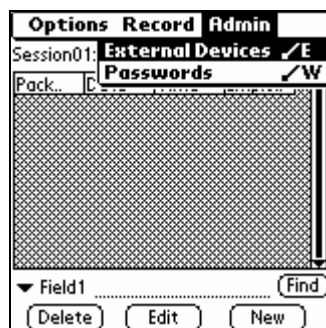
TracerPlus features an External Device Manager which is accessed through the Admin menu on the PDA. The External Device Manager allows devices ranging from printers to RFID scanners to be used in conjunction with TracerPlus. Currently available in TracerPlus 2.8 is support for the Zebra TR 220 printers, PT403 printers, QL series printers and other Zebra printers using the EPL, CPCL and ZPL print languages. We also support a generic (Text Only) mode of printing. Selecting this printer type simply sends the data in your format exactly as you entered it. Of course, you still have the same ability to populate variables with their respective field data.

6.1 External Printers

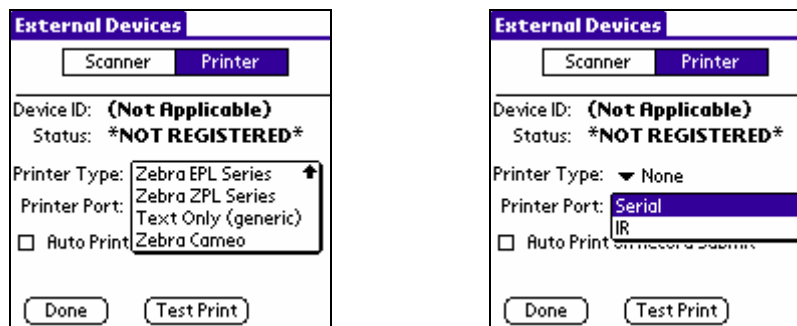
TracerPlus Print licensed users can print directly from TracerPlus to an external printer. TracerPlus 2.8 features support of the TR 220 specifically manufactured for use with the Symbol SPT 1700/1800 series of Palm OS terminals as well as the Zebra PT403, QL220, QL320 and QL420 series printers. Future versions of TracerPlus will include additional printer support. Feel free to contact us with requests for support of additional printers.

6.1.1 Enabling and Registering the TracerPlus Print

1. Select **External Devices** from the Admin menu.



2. Select the **Printer Tab**, the printer you intend to use with the PDA from the **Printer Type** and the **Printer Port** from the drop down menus.

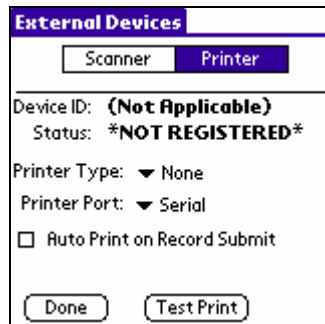


3. To ensure that your printer is operating correctly, press the test print button. This sends a sample print job to the selected printer and is used to verify proper connectivity. If you do not see this test label or receive an error, consult the Troubleshooting section of the printer documentation for possible reasons.

The registration status of your printer add-on to TracerPlus is also indicated from within this tab. If the printer is properly registered, the Status label will indicate that the device is registered.

Auto Print on Record Submit

Select Auto Print on Record Submit, a global setting, to automatically print every record when submitted.



6.1.2 Default Print Format

A default print format is included with the initial installation of TracerPlus. This is a very simple format and is optimized for receipt printing. If you wish to customize this format, the ability to upload custom formats is provided with our TracerPlus installation.

6.1.3 Uploading Custom Print Formats to TracerPlus

In order to upload a custom format for use with TracerPlus 2.8, a print format file needs to be created on the PC and uploaded to the PDA via the normal HotSync process.

1. Name the file TracerP_Format.txt .
2. Place the file in **C:\Program Files\PTS\TracerPlus 2.8\Data\PrinterData**.
3. Upload the file to the PDA via HotSync.

Note: This file **must** be named Print_Format.txt and it must be placed in your PrinterData folder. The default location of this folder is **C:\Program Files\PTS\TracerPlus 2.8\Data\PrinterData** but will vary based on your actual install location. Any file that is located in this folder with the name specified as above is uploaded to the PDA.

Note: Currently, this file must contain valid printer commands for your selected printer type. Some sample label layouts are included with your install of TracerPlus 2.8. These samples are located in the Sample Data Folder at **C:\Program Files\PTS\TracerPlus 2.8\Sample Upload Data**. Zebra also provides an in depth manual on creating these files. The manual can be downloaded at <http://www.ptshome.com/public/EPL2en.pdf> .

PTS also provides a Custom Label Formatting service in which a PTS representative will create a label format to meet your exact needs. This service can be purchased at the PTS website.

6.1.4 PTS Printer Variable Codes

In conjunction with the Zebra commands, you will undoubtedly want to print some data dynamically from TracerPlus collected data. PTS Variable codes are permitted in this file and are substituted with live data when printing a label. Valid PTS Variable codes are as follows.

[*FIELD1*], [*FIELD2*],.....[*FIELD30*]

These variable codes are substituted with the live data from the specified field in your current record. An example of how this might be used is as below.

```
N
Q400,0
A10,0,0,3,1,1,N,"Label Override Sample"
A10,50,0,3,1,1,N,"Item: [*FIELD1*]"
P1
```

The majority of this text is a set of commands specific to the Zebra Printing language. Notice the bold item, **[*FIELD1*]**. This tells TracerPlus to substitute the data in Field 1 within this format. This results in a label printout where your collected data in field 1 is printed 10 pixels from the left of the label and 50 pixels from the top. If you wish to obtain more information about Zebra commands, a visit to their website at www.zebra.com provides a download link to the Printer Command Reference.

[*SIGFIELD*]

Printing of a signature is also a valid option. Only one signature per label is permitted however. Using the **[*SIGFIELD*]** variable allows printing of the first signature encountered in the Field Settings. An example of how this might be used is as below.

```
N
Q400,0
A10,0,0,3,1,1,N,"Label Override Sample"
A10,50,0,3,1,1,N,"Item: [*FIELD1*]"
GW10,325,40,100,[*SIGFIELD*]
P1
```

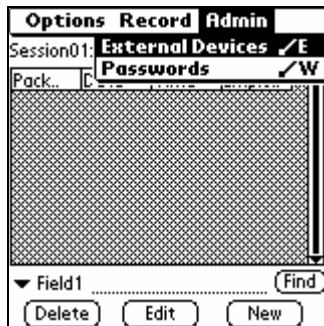
This example, like the one above, indicates that most of the data in the TracerP_Format.txt file contains Zebra commands. In the most recent example, both the data in Field 1 and any signature field as setup in TracerPlus is printed in this custom format by using the PTS Variable Codes. The signature would print 10 pixels from the left and 325 pixels from the top of the label.

6.2 External Scanners

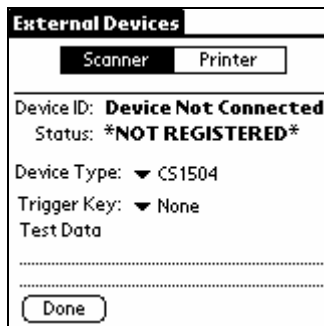
TracerPlus External Scanner licensed users can scan barcodes directly into TracerPlus via any compatible external scanner. An external scanner is a device that can connect to a PDA via a serial connection, Bluetooth or any other external communication path. TracerPlus 2.8 features support of the CS1504 scanner. This scanner is sold at the PTS website as the Plug-N-Scan kit and includes all of the necessary software licenses and cables to connect most Palm Pilots with the CS 1504 scanner. Future versions of TracerPlus will include additional external scanner support. Feel free to contact us with requests for support of additional scanners.

6.2 Enabling and Registering the External Scanners

1. Select **External Devices** from the Admin menu.



2. Select the Scanner Tab and the scanner you intend to use with the PDA from the drop down menu.



3. From the **Trigger Key** drop down list, choose a **Trigger Key**. The Trigger Key is used to complete the data capture transaction and is required by certain external devices including the CS1504.
4. You may now scan a barcode and press the selected trigger key to test your connection.

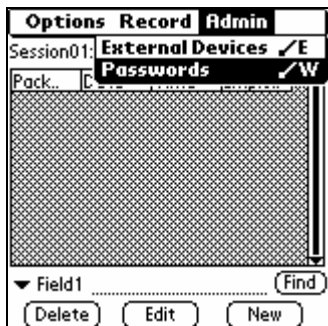
The registration status of your external scanner is also indicated from within this tab. If the scanner is properly registered, the Status label will indicate that the device is registered.

Chapter 7: Administration Settings

Once sessions are configured, it is customary to implement password protection so field personnel cannot easily alter the session settings. When a **Password** is set, a user is required to enter this **Password** to access any areas protected by the TracerPlus Admin Settings. Administrators commonly **Enable Protection** for **Session Settings** and **Field Settings**. Below you will learn how to set Passwords and set protection levels for program settings as well as data.

7.1 Setting Passwords

1. Select **Passwords** in the Grid Screen
2. Select **Use Password**
3. Enter your **Password**
4. Enter additional protection levels; **Session Settings**, **Field Settings**, **Delete One Record**, **Delete All Records** and **Edit Records**



7.1.2 Enable Protection for

Session Settings

When protection is enabled for **Session Settings**, the user is required to enter a password to edit or add sessions.

Field Settings

When protection is enabled for **Field Settings**, the user is required to enter a password to edit or add field information.

Delete One Record

When protection is enabled for **Delete One Record**, the user is required to enter a password to delete a record from the data view screen.

Delete All Records

When protection is enabled for **Delete All Records**, the user is required to enter a password to delete all records from the menu bar.

Edit Records

When protection is enabled for **Edit Records**, the user is required to enter a password to edit a record.

7.2 Deploying Configured Sessions to Multiple Users

7.2.1 How to Copy One PDA Configuration to Other PDAs

TracerPlus configured sessions can easily be deployed to your mobile workforce. To perform an enterprise-wide deployment, simply follow these steps.

1. Create desired configuration on one PDA.
2. Test this configuration until satisfied with the results.
3. Perform HotSync with this PDA.
4. Locate the created file TP28-TracerPlus_Sessions.pdb.
5. Double Click this file and select the user(s) to deploy it to.
6. If the session consists of Drop-Down Menus, the Drop-Down list backup files must also be installed to the new user.
7. If the session consists of Field Hints, the Field Hints backup file must also be installed to the new user.
8. Perform HotSync of those user(s).
9. The Session settings should then be transferred to the new PDA.

7.2.2 File Names Used by TracerPlus

This section lists the various file names used by TracerPlus on the PC. It is here for your reference in deploying and troubleshooting your TracerPlus configuration.

Note that sessions are identified by their session number, e.g. “**S01**”, and fields are identified by their field number, e.g. “**F02**” (with “S01F02” indicating the first session and second field).

Upload Filenames: (located in the “ToPDA” folder)

| | |
|-----------------|---------------|
| Data Records | S01_Data.txt |
| Field Hints | S01_Hints.txt |
| Drop-Down Lists | S01F02.txt |

Backup Filenames: (located in the “Palm\username\backup” folder)

| | |
|----------------------|---|
| Session definitions | TP28-TracerPlus_Sessions.pdb |
| Data Records | TP28-Data_S01_30.pdb (Pro mode) |
| Data Records | TP28-Data_S01_10.pdb (Standard mode) |
| Drop-Down Lists | TP28-List_S01F02.pdb |
| Bitmaps (signatures) | TP28-Bitmap_S01.pdb (Pro mode only) |
| Field Hints | TP28-Hint_S01.pdb (Pro mode only) |
| Print Formats | TP28-TracerPlus_Formats.pdb (TracerPlus Print only) |